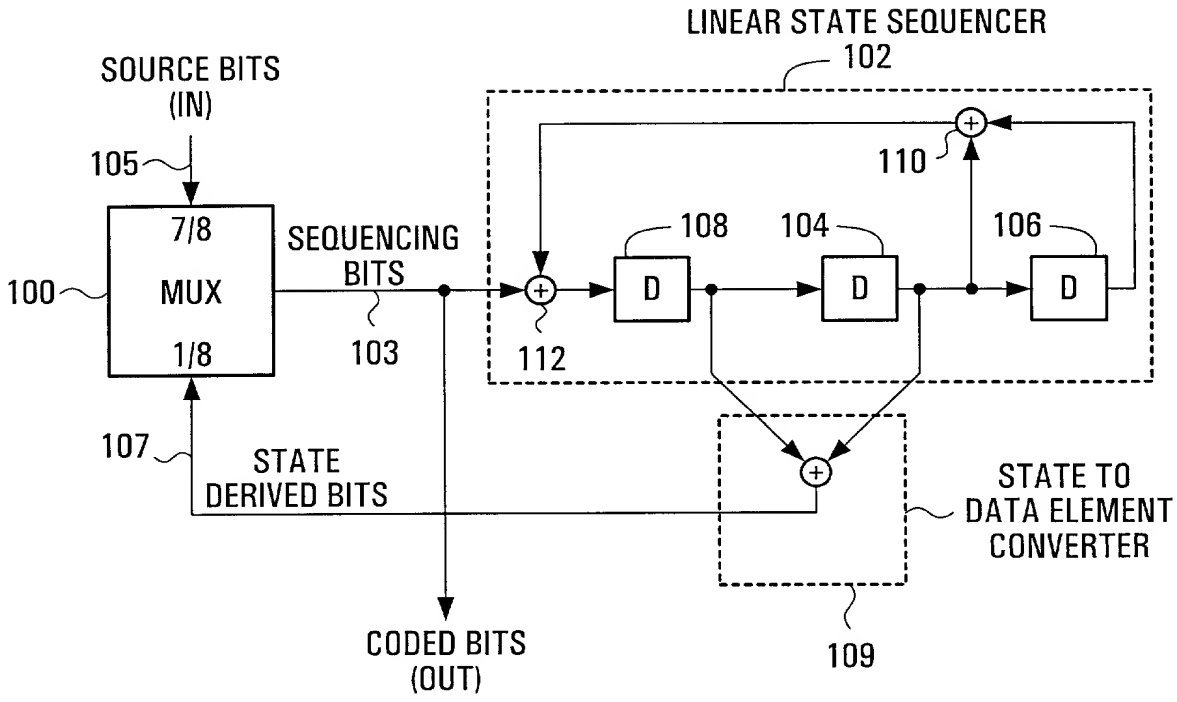

LINEAR STATE SEQUENCER
102
SOURCE BITS
(IN)
105
7/8
MUX
1/8
100
SEQUENCING
BITS
103
112
108
104
106
110
D
D
D
107
STATE
DERIVED BITS
STATE TO
DATA ELEMENT
CONVERTER
109
CODED BITS
(OUT)

FIG. 1

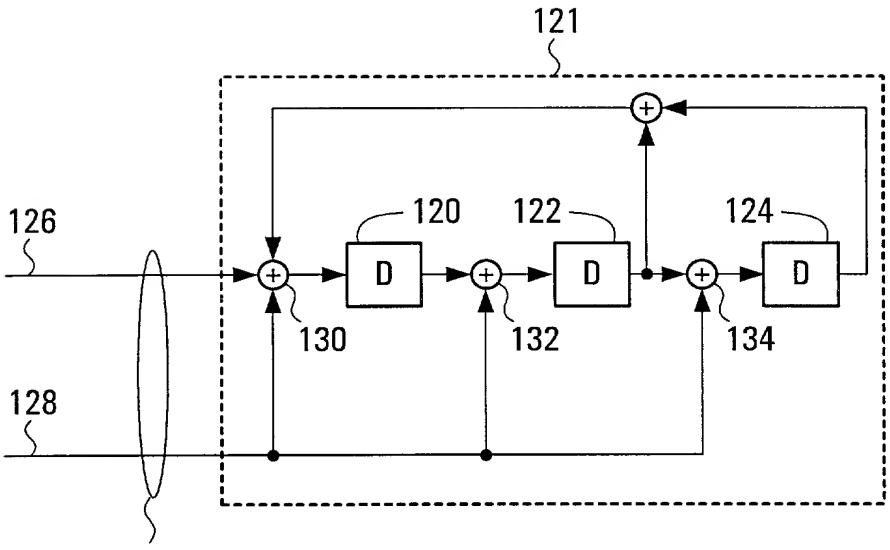


FIG. 2

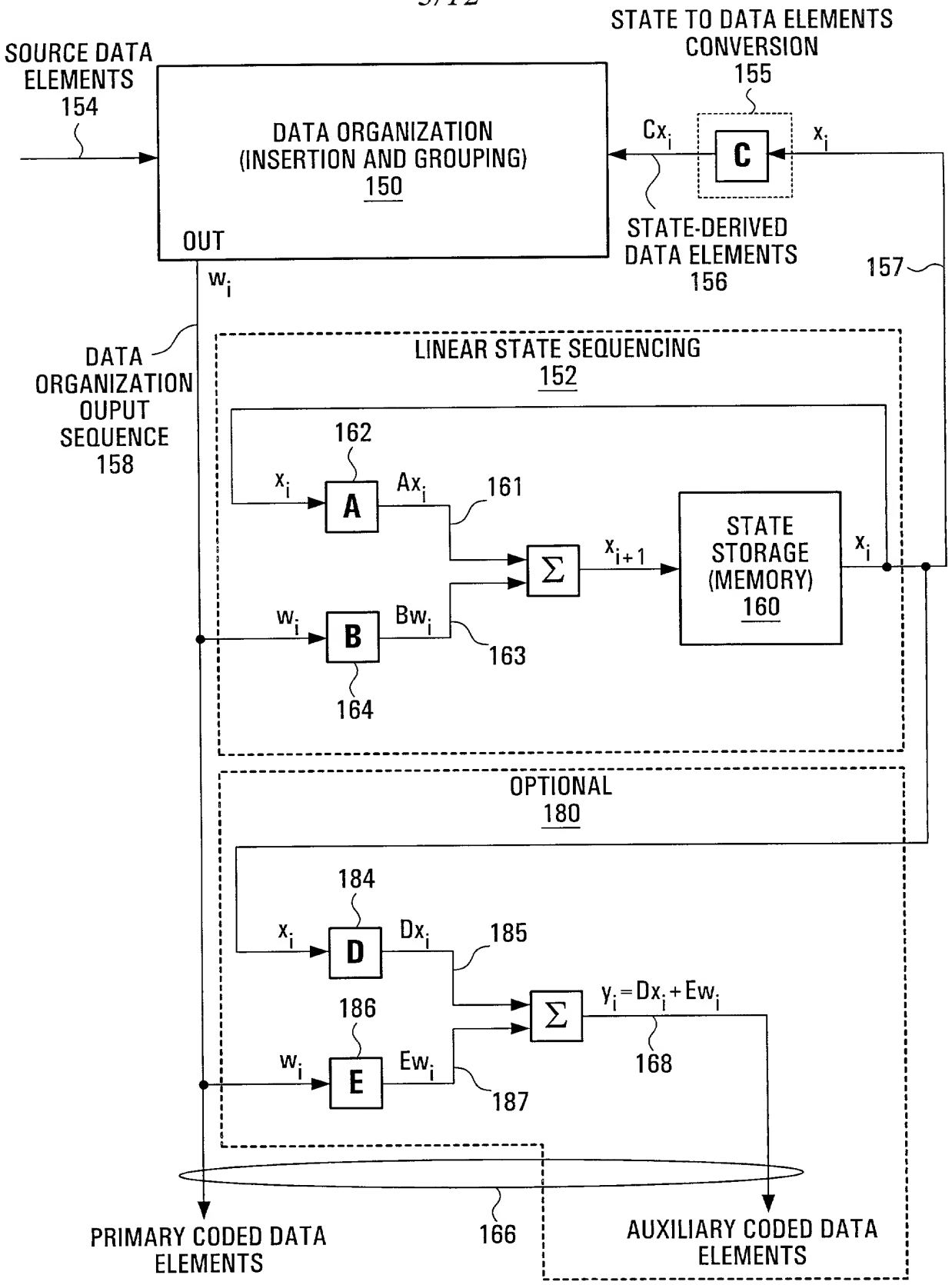

SOURCE DATA ELEMENTS 154
DATA ORGANIZATION (INSERTION AND GROUPING) 150
OUT
w_i
STATE TO DATA ELEMENTS CONVERSION 155
Cx_i
C
x_i
STATE-DERIVED DATA ELEMENTS 156
157
DATA ORGANIZATION OUPUT SEQUENCE 158
LINEAR STATE SEQUENCING 152
162
x_i
A
Ax_i
161
x_{i+1}
STATE STORAGE (MEMORY) 160
x_i
w_i
B
Bw_i
163
164
OPTIONAL 180
184
x_i
D
Dx_i
185
$y_i = Dx_i + Ew_i$
186
w_i
E
Ew_i
187
168
166
PRIMARY CODED DATA ELEMENTS
AUXILIARY CODED DATA ELEMENTS

FIG. 3

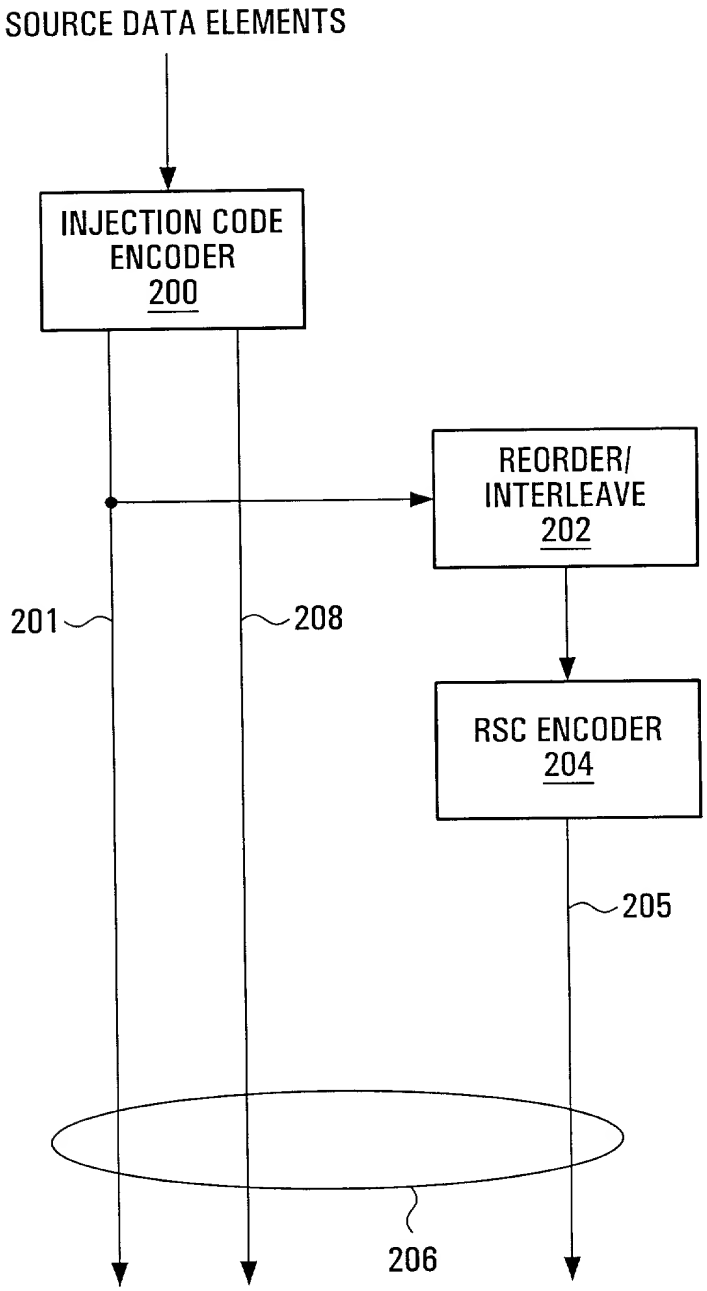

SOURCE DATA ELEMENTS
INJECTION CODE ENCODER 200
REORDER/ INTERLEAVE 202
201
208
RSC ENCODER 204
205
206

FIG. 4

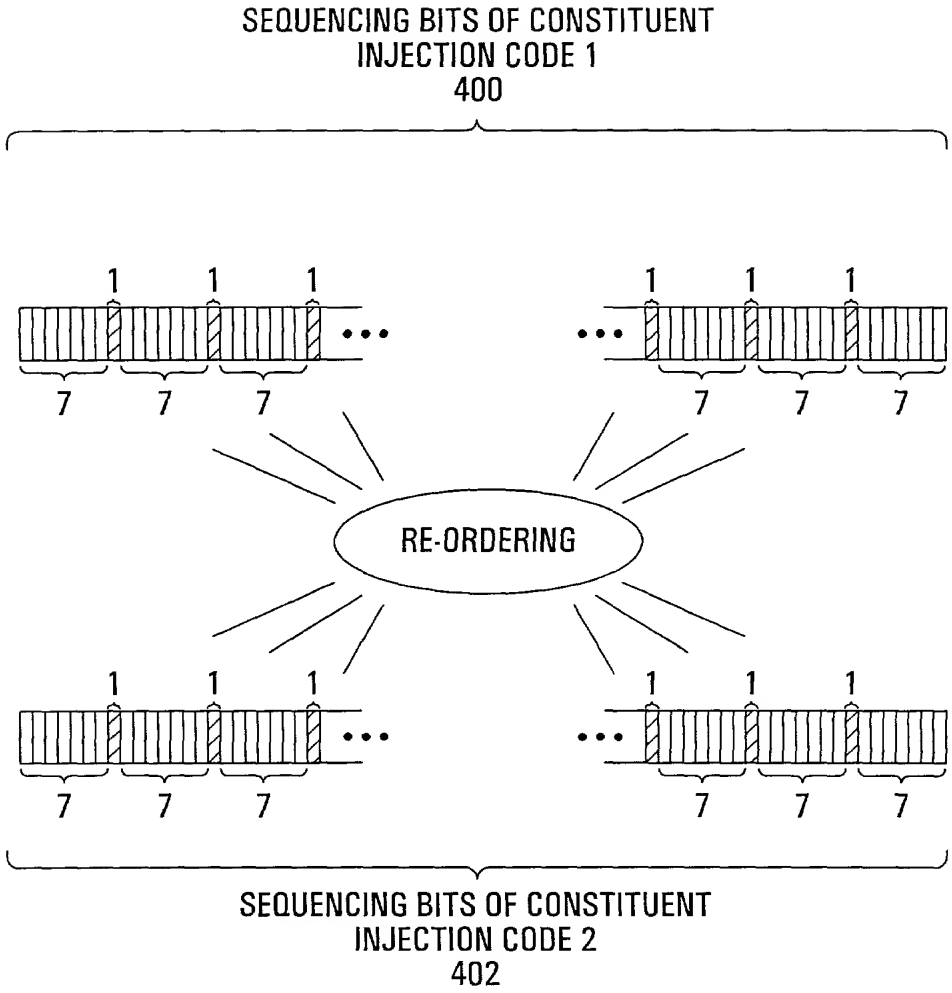

SEQUENCING BITS OF CONSTITUENT
INJECTION CODE 1
400
1 1 1
7 7 7
RE-ORDERING
SEQUENCING BITS OF CONSTITUENT
INJECTION CODE 2
402

FIG. 5

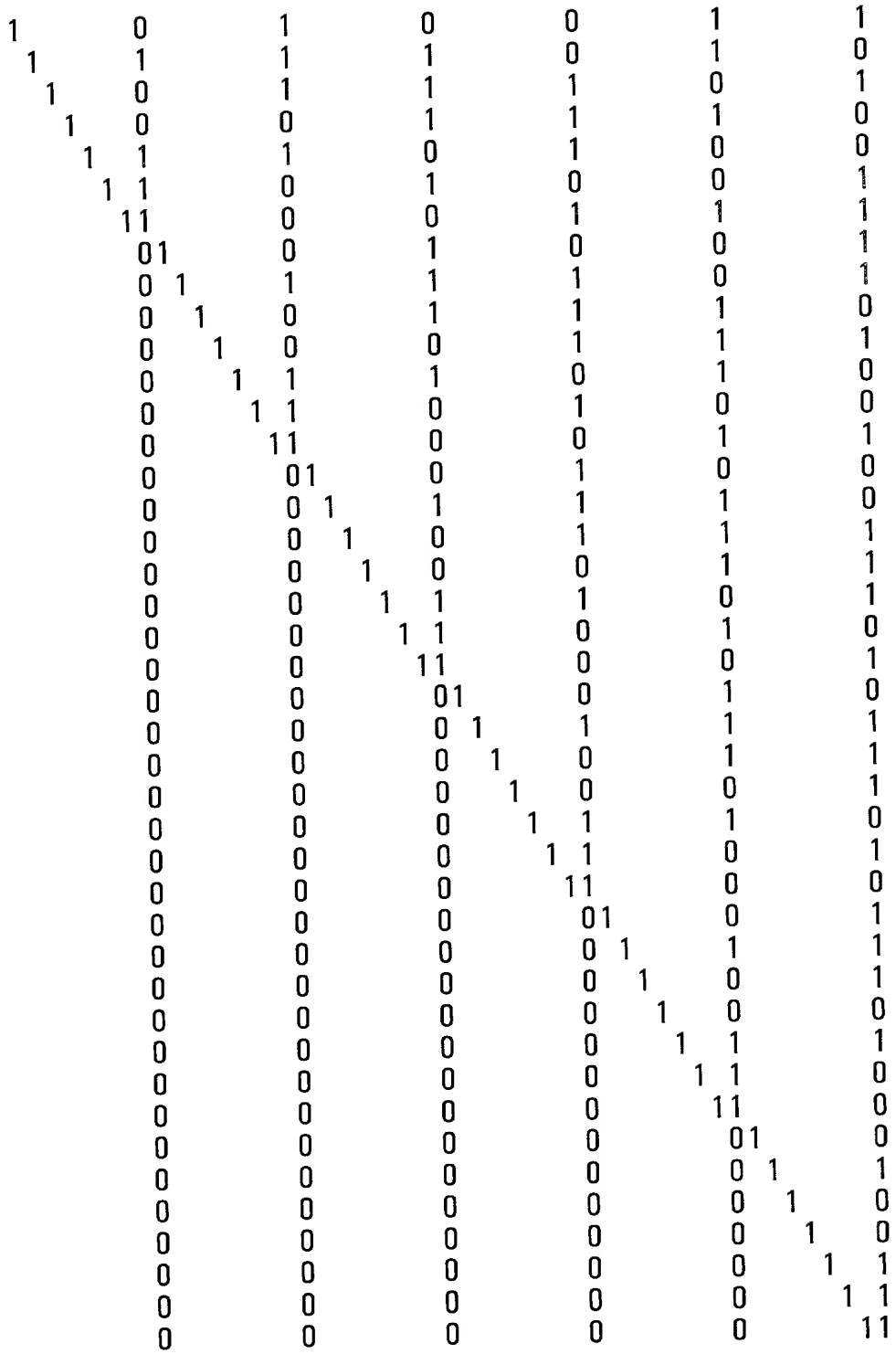


FIG. 6

```
[ 01001110000000000000000000000000000000000001         ]
[ 111010001001110000000000000000000000000000  1        ]
[ 011101011101000100111000000000000000000000    1      ]
[ 001110101110101110100010011100000000000000      1    ]
[ 110100100111010111010111010001001110000000        1  ]
[ 101001111010010011101011101011101000100111          1 ]
```

FIG. 7

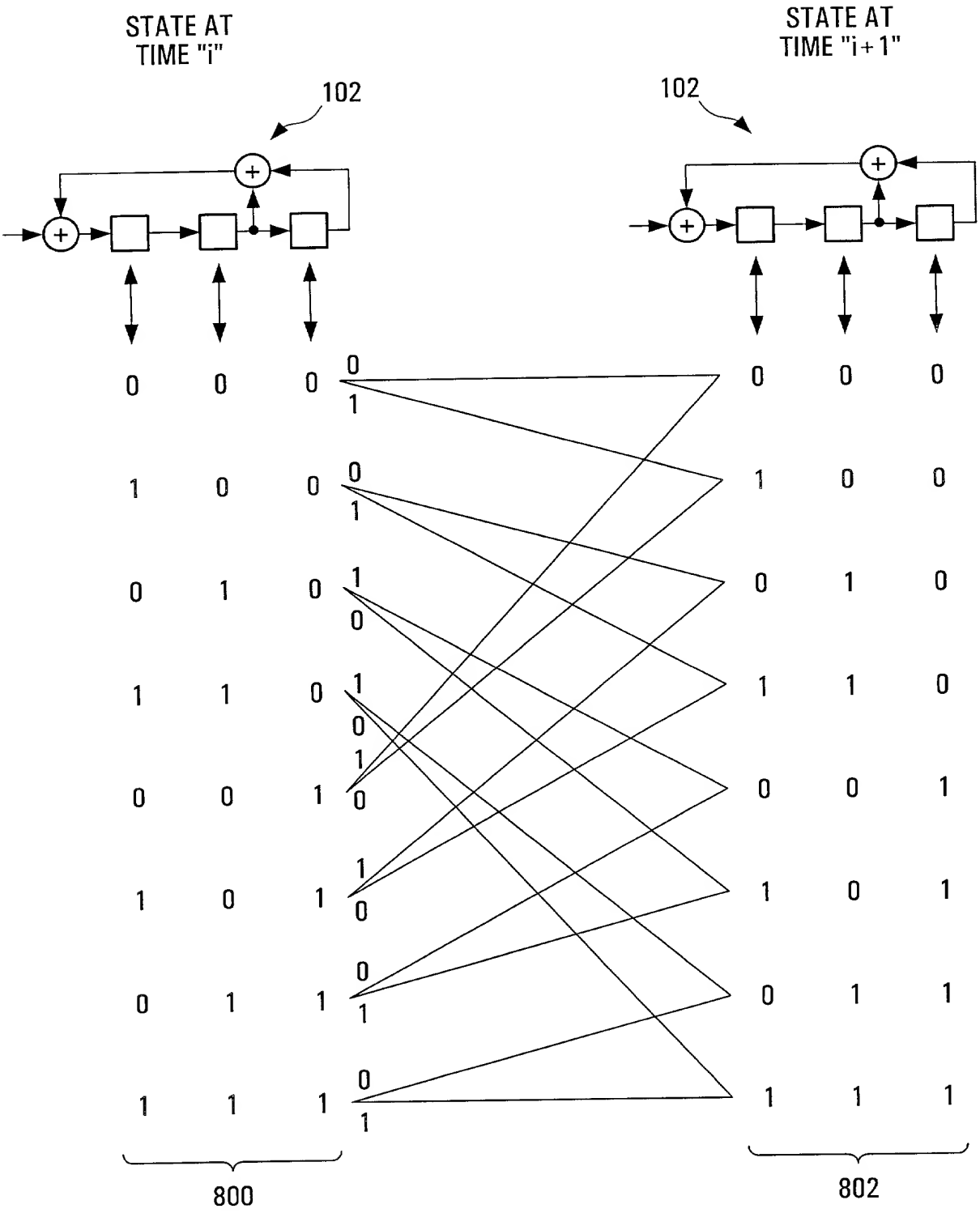

STATE AT TIME "i"
STATE AT TIME "i+1"
102
102
0 0 0
1 0 0
0 1 0
1 1 0
0 0 1
1 0 1
0 1 1
1 1 1
0
1
800
802

FIG. 8A

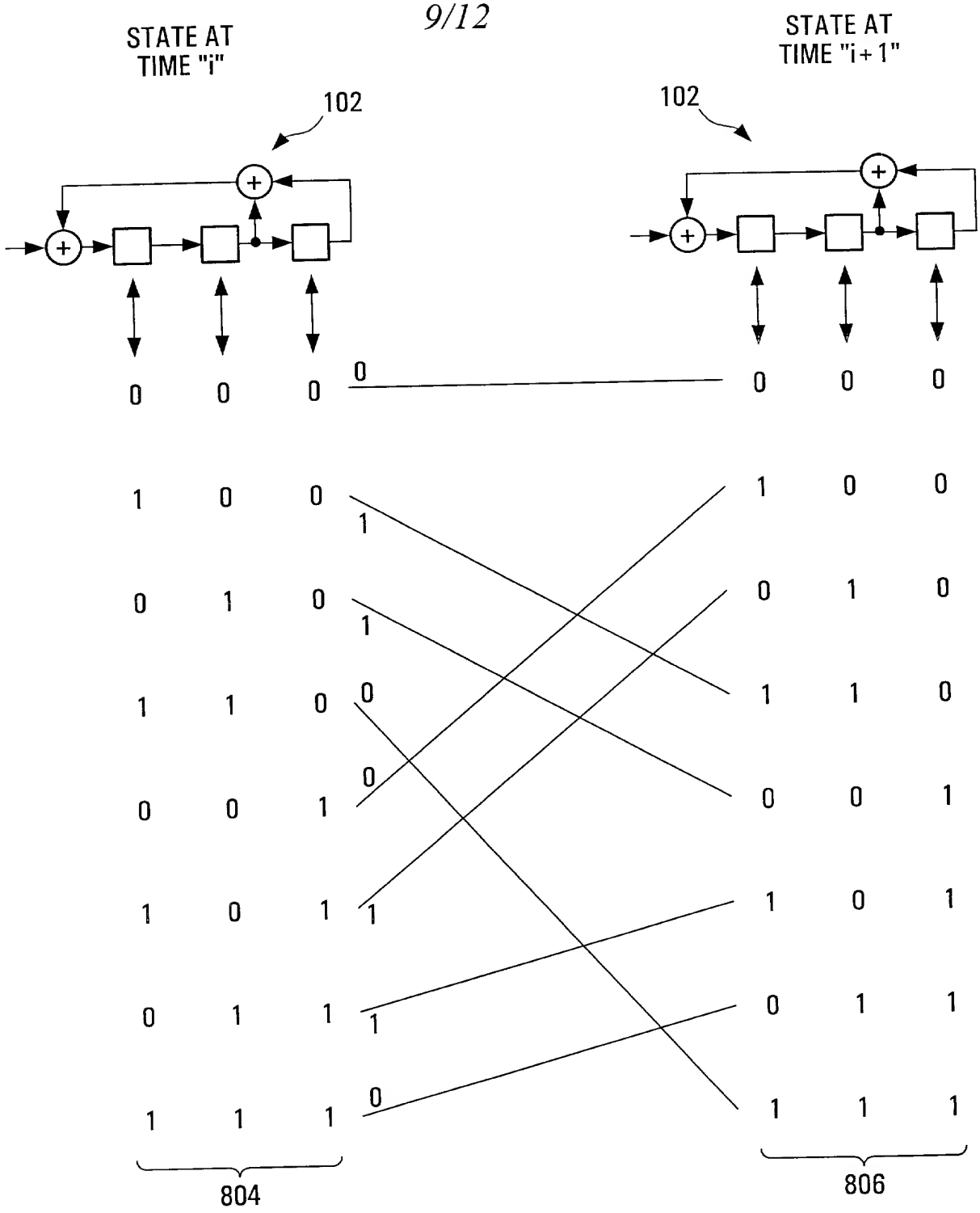

STATE AT TIME "i"
STATE AT TIME "i+1"
102
102
0 0 0
0 0 0
1 0 0
0 1 0
1 1 0
0 0 1
1 0 1
0 1 1
1 1 1
1 0 0
0 1 0
1 1 0
0 0 1
1 0 1
0 1 1
1 1 1
804
806

FIG. 8B

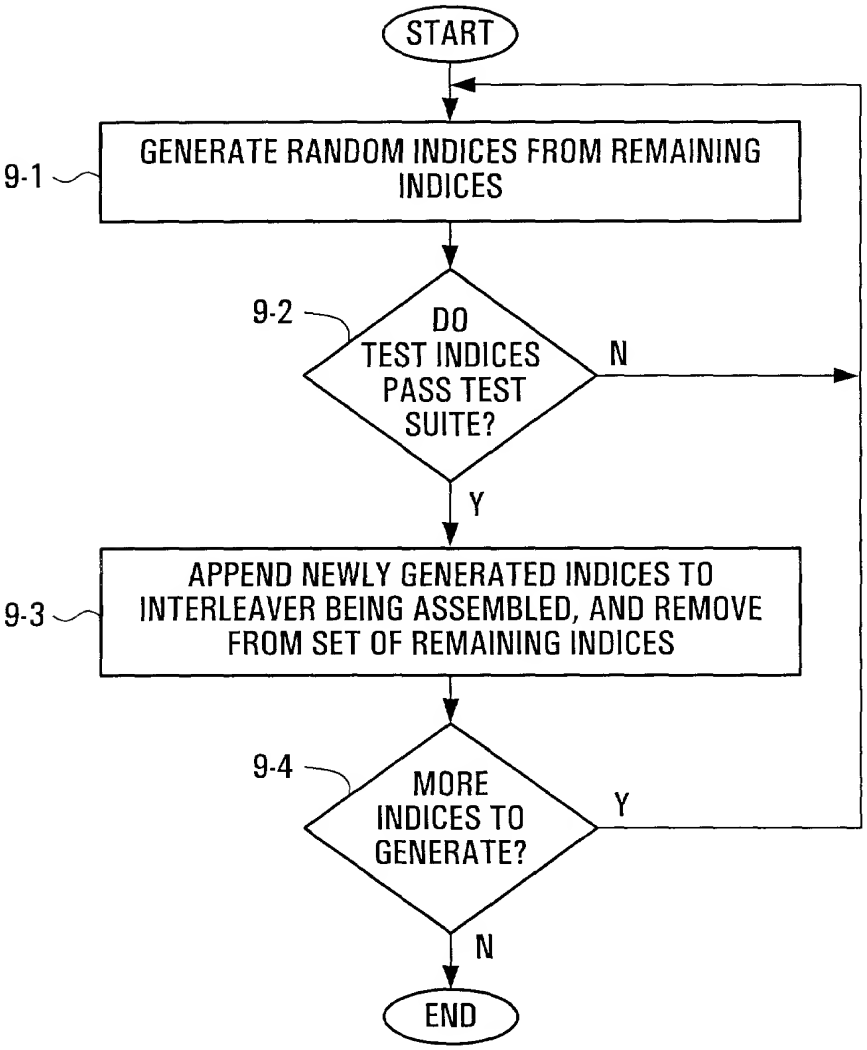

START
GENERATE RANDOM INDICES FROM REMAINING INDICES
9-1
9-2
DO TEST INDICES PASS TEST SUITE?
N
Y
APPEND NEWLY GENERATED INDICES TO INTERLEAVER BEING ASSEMBLED, AND REMOVE FROM SET OF REMAINING INDICES
9-3
9-4
MORE INDICES TO GENERATE?
Y
N
END

FIG. 9

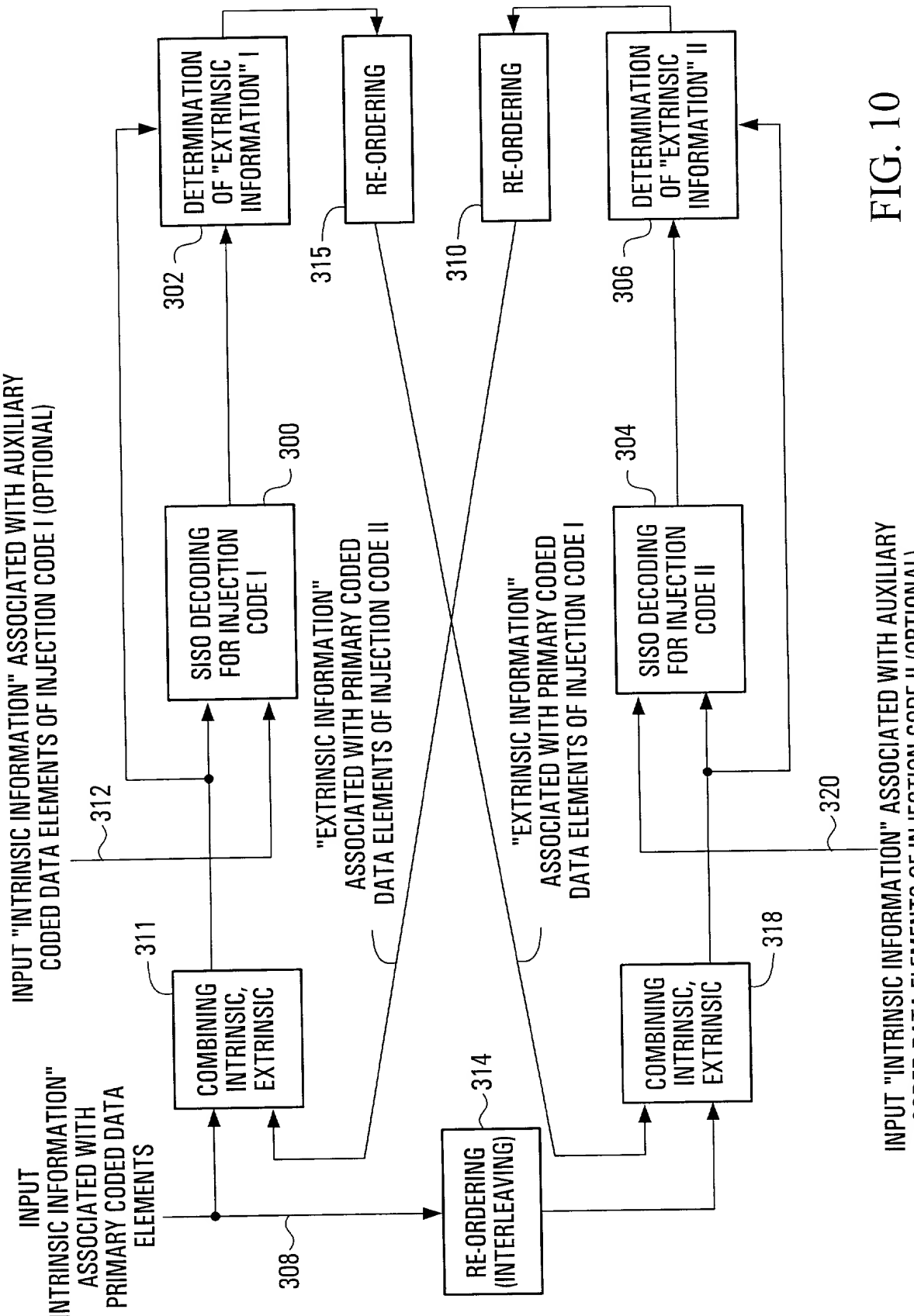
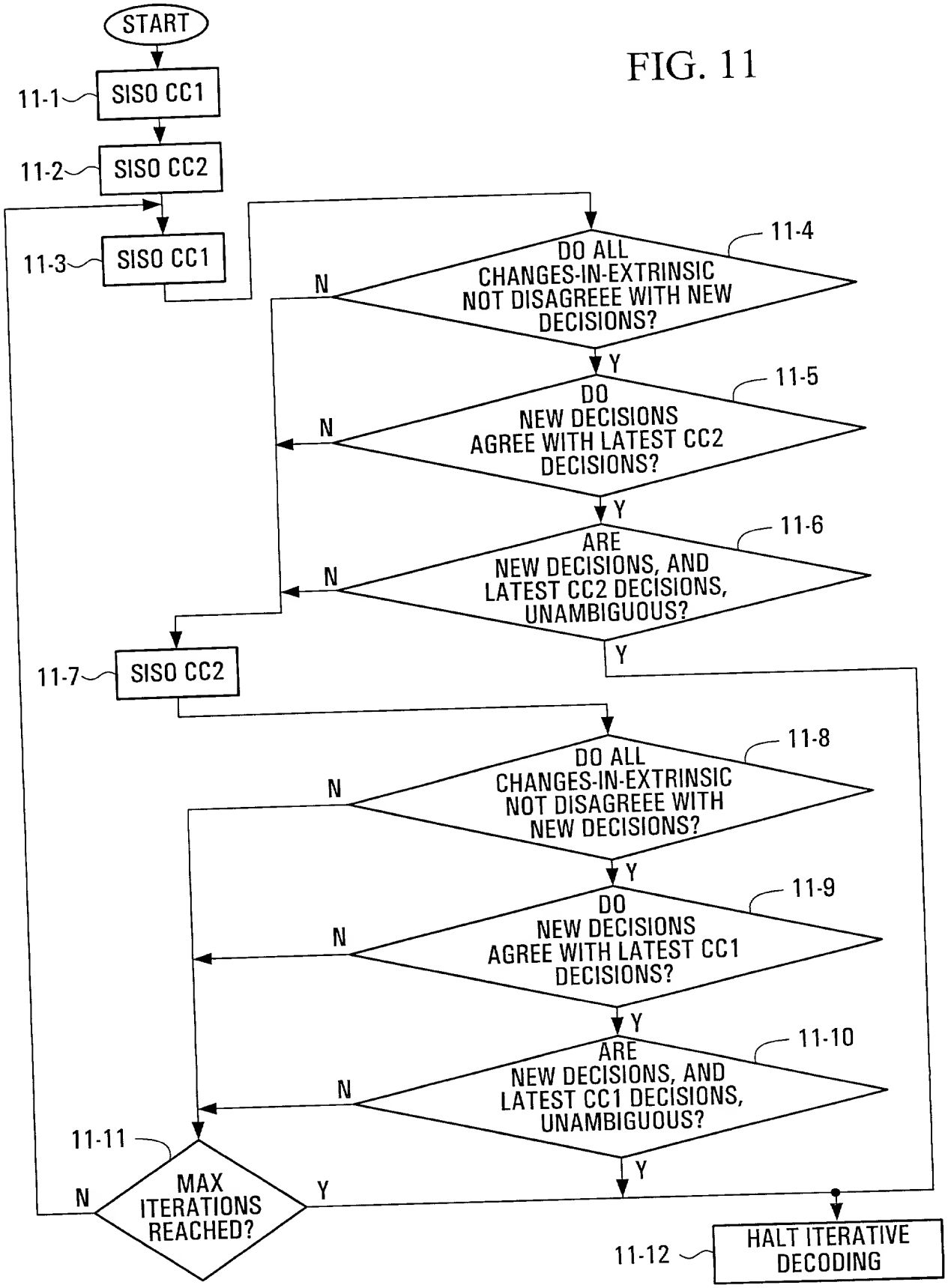

INPUT "INTRINSIC INFORMATION" ASSOCIATED WITH PRIMARY CODED DATA ELEMENTS
INPUT "INTRINSIC INFORMATION" ASSOCIATED WITH AUXILIARY CODED DATA ELEMENTS OF INJECTION CODE I (OPTIONAL)
COMBINING INTRINSIC, EXTRINSIC
SISO DECODING FOR INJECTION CODE I
DETERMINATION OF "EXTRINSIC INFORMATION" I
RE-ORDERING
"EXTRINSIC INFORMATION" ASSOCIATED WITH PRIMARY CODED DATA ELEMENTS OF INJECTION CODE II
RE-ORDERING (INTERLEAVING)
"EXTRINSIC INFORMATION" ASSOCIATED WITH PRIMARY CODED DATA ELEMENTS OF INJECTION CODE I
RE-ORDERING
COMBINING INTRINSIC, EXTRINSIC
SISO DECODING FOR INJECTION CODE II
DETERMINATION OF "EXTRINSIC INFORMATION" II
INPUT "INTRINSIC INFORMATION" ASSOCIATED WITH AUXILIARY CODED DATA ELEMENTS OF INJECTION CODE II (OPTIONAL)
308
311
312
300
302
315
310
314
304
306
318
320

FIG. 10

FIG. 11


START
11-1
SISO CC1
11-2
SISO CC2
11-3
SISO CC1
11-4
DO ALL CHANGES-IN-EXTRINSIC NOT DISAGREEE WITH NEW DECISIONS?
N
Y
11-5
DO NEW DECISIONS AGREE WITH LATEST CC2 DECISIONS?
N
Y
11-6
ARE NEW DECISIONS, AND LATEST CC2 DECISIONS, UNAMBIGUOUS?
N
Y
11-7
SISO CC2
11-8
DO ALL CHANGES-IN-EXTRINSIC NOT DISAGREEE WITH NEW DECISIONS?
N
Y
11-9
DO NEW DECISIONS AGREE WITH LATEST CC1 DECISIONS?
N
Y
11-10
ARE NEW DECISIONS, AND LATEST CC1 DECISIONS, UNAMBIGUOUS?
N
Y
11-11
MAX ITERATIONS REACHED?
N
Y
11-12
HALT ITERATIVE DECODING